

BOISE COLD STORAGE (PWS# 4010206) SOURCE WATER ASSESSMENT FINAL REPORT

April 25, 2001



State of Idaho Department of Environmental Quality

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Under the Federal Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. The Idaho Department of Environmental Quality is completing the assessments for all Idaho public drinking water systems. The assessment for your particular drinking water source is based on a land use inventory within a 1,000 foot radius of your drinking water source, sensitivity factors associated with the source and characteristics associated with either your aquifer or watershed in which you live.

This report, *Source Water Assessment for Public Water System (PWS) #4010206 located in Boise, Idaho*, describes the public drinking water system, the associated potential contaminant sources located within a 1,000' boundary around the drinking water source, and the susceptibility (risk) that may be associated with any potential contaminants. This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this system. **The results should not be used as an absolute measure of risk and is not intended to undermine the confidence in your water system.**

The Boise Cold Storage drinking water system consists of a single well drilled to a depth of 603 feet and finished in a coarse sand layer. According to the well log, an underground aquitard is present, consisting of low permeability layers that are collectively greater than 50 feet thick. This aquitard may serve to help protect the ground water at well depth. In addition, regional soil data indicates the presence of soils that are poorly to moderately drained in the delineation area. These soil types may actually offer some additional protection to the water system by retarding the downward movement of contaminants in the unlikely event of a spill or release in the vicinity of the well.

The final analysis rated a moderate susceptibility to inorganic compounds, volatile organic compounds, synthetic organic compounds, and microbial contaminants. These ratings can be attributed, in large part, to the urban location of the well and the numerous potential contaminant sources within the designated source water area. Furthermore, the well resides within a Group 1 Priority Area for organic compounds. These areas are considered by the DEQ to be potentially vulnerable to ground water contamination, so an increased land use score was applied to the system.

Based on the initial computer generated contaminant source inventory conducted by the DEQ, many potential contaminant sources were contained within the 1,000-foot boundary. These sites have been summarized and included in Table 1. A copy of the completed susceptibility analysis for your system along with a map showing any potential contaminant sources is included with this summary.

Table 1.

SITE #	Source Description	Source of Information	Potential Contaminants
1, 6	LUST/UST (Cleanup Incomplete)	Database Search	VOC, SOC
2, 10	LUST/UST (Cleanup Completed)	Database Search	VOC, SOC
3, 12	LUST/UST (Cleanup Completed)	Database Search	VOC, SOC
4, 8	LUST/UST (Cleanup Completed)	Database Search	VOC, SOC
5	UST (Closed)	Database Search	VOC, SOC
9	UST (Closed)	Database Search	VOC, SOC
11, 13	UST (Closed)	Database Search	VOC, SOC
14, 42	RCRIS Site (Painters)	Database Search	IOC, VOC, SOC
15	Automobile Repair and Service	Business Mailing List	IOC, VOC, SOC
16, 32	Photographers-Commercial	Business Mailing List	IOC, VOC
17	Warehouse-Cold Storage	Business Mailing List	N/A
18	Automobile Body Shop	Business Mailing List	IOC, VOC, SOC
20	Wrecker Service	Business Mailing List	VOC, SOC
21	Sign Manufacturers	Business Mailing List	IOC, VOC, SOC
22, 44	RCRIS Site-Automobile Body Shop	Business Mailing List	IOC, VOC, SOC
23	Photographers-Commercial	Business Mailing List	IOC, VOC
24	Automobile Parts and Supplies	Business Mailing List	VOC, SOC
25	Photographers-Commercial	Business Mailing List	IOC, VOC
26	Photographers-Commercial	Business Mailing List	IOC, VOC
27	Woodworkers	Business Mailing List	IOC, VOC, SOC
28	Automobile Repair & Service	Business Mailing List	IOC, VOC, SOC
29	Automobile Parts and Supplies	Business Mailing List	VOC, SOC
30	Florist	Business Mailing List	IOC, SOC
31	Aircraft Equipment Parts & Supplies	Business Mailing List	VOC, SOC
33	Mufflers and Exhaust Systems	Business Mailing List	VOC, SOC
34	General Contractor	Business Mailing List	IOC, VOC, SOC
35	Automobile Repairing & Service	Business Mailing List	IOC, VOC, SOC
36	Used Automobile Dealer	Business Mailing List	IOC, VOC, SOC
37—41	Federal Government-Liaison Offices	Business Mailing List	N/A
43	RCRIS Site-Office Supplies	Business Mailing List	IOC, VOC, SOC

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

For Boise Cold Storage, source water protection activities should focus on implementation of practices aimed at minimizing leaching compounds from the potential contaminant sources within the designated source water area. Source water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term.

For assistance in developing drinking water protection strategies please contact the DEQ-Boise Regional Office at 208-373-0550.

POTENTIAL CONTAMINANT INVENTORY LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as **ASuperfund@** is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

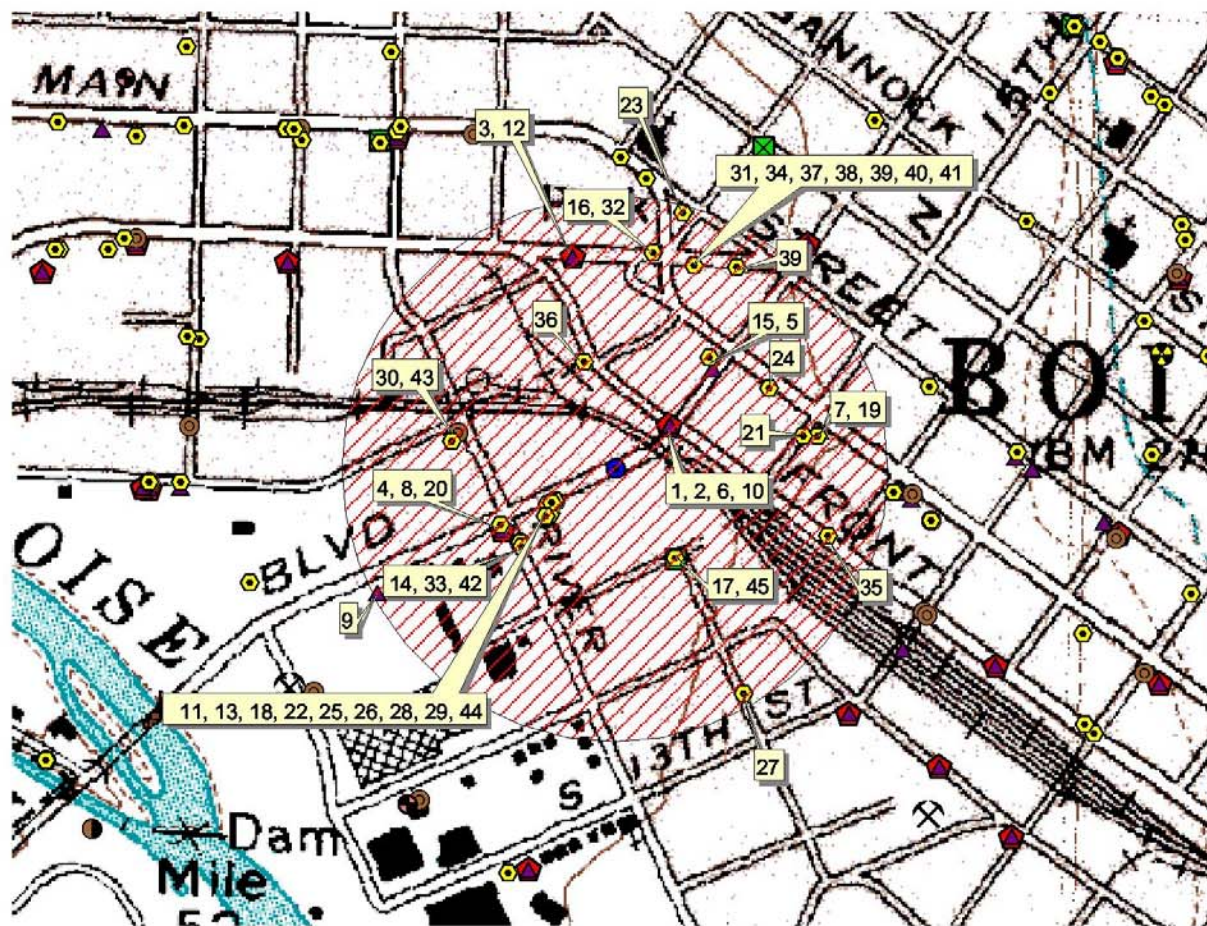
Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.

Figure 1. Boise Cold Storage Delineation

Boise Cold Storage: Well #1 PWS Number: 4010206



LEGEND

- Wellhead
- ✚ Enhanced Inventory
- AST
- Business Mailing List
- CERCLIS Site
- ★ Dairy
- ★ Non Dairy CAFO
- Injection Well
- ⚒ Mineral Extraction Site
- NPDES Site
- RICRIS Site
- SARA Title III Site (EPCRA)
- Toxic Release Inventory
- ▲ Closed UST Site
- ▲ Open UST Site
- ⬠ LUST Site
- Landfill
- Wastewater Land App. Site
- ▨ - 1000 ft. Fixed Radius

Note: Refer to Preliminary Contaminant Inventory Form for Identification of Potential Contaminant Sources

04/26/2000
Johnna Evans



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0 500 1000 1500 2000 Feet

The final scores for the susceptibility analysis were determined using the following formulas:

- 1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.27)
- 2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.375)

Final Susceptibility Scoring:

- 0 - 5 Low Susceptibility
- 6 - 12 Moderate Susceptibility
- ≥ 13 High Susceptibility

Ground Water Susceptibility Report

Public Water System Name :

Public Water System Number

BOISE COLD STORAGE
4010206

Well# : WELL #1

2/22/01 4:40:03 PM

1. System Construction		SCORE			
Drill Date	4/7/1924				
Driller Log Available	YES				
Sanitary Survey (if yes, indicate date of last survey)	YES	1999			
Well meets IDWR construction standards	NO	1			
Wellhead and surface seal maintained	YES	0			
Casing and annular seal extend to low permeability unit	NO	2			
Highest production 100 feet below static water level	NO	1			
Well located outside the 100 year flood plain	YES	0			
Total System Construction Score		4			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	YES	0			
Vadose zone composed of gravel, fractured rock or unknown	YES	1			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	YES	0			
Total Hydrologic Score		2			
3. Potential Contaminant / Land Use - ZONE 1A		IOC Score	VOC Score	SOC Score	Microbial Score
Land Use Zone 1A	URBAN/COMMERCIAL	2	2	2	2
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		2	2	2	2
Potential Contaminant / Land Use - ZONE 1B					
Contaminant sources present (Number of Sources)	YES	17	24	20	1
(Score = # Sources X 2) 8 Points Maximum		8	8	8	2
Sources of Class II or III leacheable contaminants or 4 Points Maximum	YES	5	15	5	
Zone 1B contains or intercepts a Group 1 Area	YES	4	4	4	
Land use Zone 1B	Less Than 25% Agricultural Land	0	2	2	0
		0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B		12	14	14	2
Cumulative Potential Contaminant / Land Use Score					
		14	16	16	4
4. Final Susceptibility Source Score		10	10	10	8
5. Final Well Ranking		Moderate	Moderate	Moderate	Moderate